

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT:

(A) NAME: Hoechst Marion Roussel Deutschland GmbH
(B) STREET: -
(C) CITY: Frankfurt
(D) STATE: -
(E) COUNTRY: Germany
(F) POSTAL CODE (ZIP): 65926
(G) TELEPHONE: 069-305-7072
(H) TELEFAX: 069-35-7175
(I) TELEX: -

(ii) TITLE OF INVENTION: Antisense Oligonukleotide gegen Tenascin zur
Behandlung von Vitiligo

(iii) NUMBER OF SEQUENCES: 58

(iv) COMPUTER READABLE FORM:

(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)

(2) INFORMATION FOR SEQ ID NO: 1:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 7346 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION: 1..7346

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

GAATTGGGTA	GAGCCCTAGA	GCCCCAGCAG	CACCCAGCCA	AACCCACCTC	CACCATGGGG	60
GCCATGACTC	AGCTGTTGGC	AGGTGTCTTT	CTTGTCTTTC	TTGCCCTGGC	TACCGAAGGT	120
GGGGTCTCTA	AGAAAGTCAT	CCGGCACAAG	CGACAGAGTG	GGGTGAACGC	CACCCCTGCCA	180
GAAGAGAACC	AGCCAGTGGT	GTTTAACCAAC	GTTTACAACA	TCAAGCTGCC	AGTGGGATCC	240
CAGTGTTCGG	TGGATCTGGA	GTGAGCCAGT	GGGGAAGAAAG	ACCTGGCACC	GCCTTCAGAG	300
CCCAGCGAAA	GCTTTTCAGGA	GCACACASTA	GATGGGGAAA	ACCAATTTGT	CTTCACACAT	360
CGCATCAACA	TCCCCCGCCG	GGCTGTGTGG	TGTGCTGCAG	CCCTGTATGT	TAAAGAGCTG	420
CTGAGCAGAC	TGGAGGAGCT	GGAGAACCTG	GTGTCTTCCC	TGAGGGAGCA	ATGTAAGTGA	480
GGAGCAGGCT	GCTGTCTCCA	GCTTGCCACA	GGCGGTTTGG	ACACAGGACC	CTTCTGTAGC	540
GCTCGGGGCA	ACTTCAGCAC	TGAAGGATGT	GGCTGTGTCT	GCGAAGCTGG	CTGGAAAGGC	600
CCCAACTGTT	CTGAGCCCGA	ATGTCCAAGC	AACTGTCAAC	TTGGAGGGCG	GTTCATTGAT	660
GGGCAGTCCA	TCTGTGACGA	CGCTTTCACG	GGCGAGGACT	GCAGCCAGCT	GGCTTGCCCC	720
AGCGACTGCA	ATGACCAGGG	CAAGTGCCTG	AATGGAGTCT	GCATCTGTTT	CGAAGGCTAC	780
GCGGCTGACT	GCAGCCGTGA	AATGTGCCCA	GTGCCCTGCA	GTGAGGAGCA	CGGCACATGT	840
GTAGATGGGT	TGTGTGTGTG	CCACGATGGC	TTTGCAGGGC	ATGACTGCAA	CAAGCCCTCTG	900
TGTCTCAACA	ATTGCTACAA	CCGTGGAAGA	TGCGTGGAGA	ATGAGTGGCT	GTGTGATGAG	960

REPLACEMENT SHEET (RULE 26)

GGTTTTCACGG	GGGAAGACTG	CAGTGTAGCTC	ATCTGCCCCA	ATGACTGCTT	CGACCGGGGGC	1020
CGGTGCACTCA	ATGGCACCTG	CTACTGCGAA	GAAGGTTTCA	CAGGTGAAGA	CTGGGGGAAA	1080
CCACACTGCCC	CACATGCTTG	CCACACCCAG	GGCCGCTGTG	AGGAGGGGCA	GTGTGTATGT	1140
GATGAGGCTT	TTGCGCGTGT	GGACTGTAGC	GAGAAGAGGT	GTCTGCTGA	CTGTACAAAT	1200
CGTGGCGCTT	GTGTAGACGG	GGGTGTGTAG	TGTGATGATG	GTTCGACTGG	AGGTGACTGT	1260
GGGGAGCTCA	AGTGTCCCAA	TGGGTGTCAAT	GGCCATGGCC	GCTGTGTCAA	TGGGGAGTGT	1320
GTGTGTGATG	AGGGCTATAC	TGGGGAAGAC	TGCAGCCAGC	TACGGTGGCC	CAATGACTGT	1380
CACAGTGGGG	GGCGCTGTGT	CGAGGGCAAA	TGTGTATGTG	AGCAAGGCTT	CAAGGGGTAT	1440
GACTGTGCTG	ACATGAGCTG	CGCTAATGAC	TGTCAACAGC	ACGGCGCTG	TGTGAATGGC	1500
ATGTGTGTGT	GTGATGACGG	CTACACAGGG	GAAGACTGCC	GGGATCGCCA	ATGGCCCGAG	1560
GACTGTGAGCA	ACAGGGGCTT	CTGTGTGAC	GGACACTGCC	TGTGTGAAGA	CGGCTTCAAC	1620
GGCGCTGACT	GTGCAGAACT	CTCTGTGCA	AATGACTGCC	ATGGCCAGGG	TGCTGTGTGT	1680
AATGGGCACT	GGGTGTGCA	TGAAGGATTT	ATGGGCAAA	ACTGCAAGGA	GCAAAGATGT	1740
CCCACTGACT	GTGATGGCCA	GGCGCTGTGT	GTGACGGCC	AGTGTGCTG	CCACGAGGGC	1800
TTCAAGGGC	TGGACTGTGT	CCAGCACTCC	TGCCCGAGTG	ACTGCAACAA	CTTAGGACAA	1860
TGGCTGTGCG	GGCGCTGTAT	CTGCAACGAG	GGTACAGCG	GAGAAGACTG	CTCAGAGGTG	1920
TCTCTGTGCA	AAGACCTGCT	TGTGACAGAA	GTGACGGAAG	AGACGCTCAA	CTCGCTGTGG	1980
GACAAATGAGA	TGGGGGTGAC	AGAGTACCTT	GTGTGTGACA	CGCCGACCCA	CGAGGGTGGT	2040
CTGGAATGCT	AGTTCTGTGT	GGCTGGGGAC	CAGACGTGCA	CCATCATCCG	GGAGGTGGAG	2100
CGTGTGTGTG	AGTACTTTAT	CGGTGTATTT	GGCATCTGTG	AGAACAGAA	GAGCATTCCT	2160
GTGAGGGCCA	GGGTGGGGAC	GTACTTACCT	GCACCTGAAG	GGCTGAAAT	CAAGTCCATC	2220
AAGGAGACAT	CTGTGGAAAT	GGAGTGGGAT	CTCTAGACA	TTGCTTTTGA	AACTTGGGAG	2280
ATCATCTTCC	GGAAATATGAA	TAAAGAAAT	GAGGGAGAGA	TACCCAAAAG	CTTGAGGAGG	2340
CCAGAGACCT	CTTACCGGCA	AACTGTCTTA	GGCTGTGGC	AAGAGTATGA	GATATCTCTG	2400
CACATAGTGA	AAAAACAATAC	CGGGGGCTCT	GGCTGAAGA	GGGTGACAC	CACACGGTTG	2460
GATGGGGCCA	GGCAGATCGA	GGTGAAGAT	GTCAAGACA	CCACTGCTTT	GATCACCTGG	2520
TTCAAGGGCC	TGGCTGAGAT	CGATGGCATT	GAGGTGACCT	ACGGCATCAA	AGACGTGGCA	2580
GGAGACCTTA	CCACCATCGA	TGTCAAGAG	GAGGAGAACC	AGTACTCCAT	CGGGAACTGT	2640
AAGCTGTACA	CTGAGTACGA	GGGTGCTCTC	ATCTGCGCA	GAGGTGACAT	GTCAAGCAAC	2700
CCAGCCAAAG	AGACCTTCAC	AACAGGCTCT	GATGCTCCCA	GGAACTCTTG	ACGTGTCTTC	2760
CAGACAGATA	ACAGCATCAC	CTTGAATGG	AGGAATGGCA	AGGCAGCTAT	TGACAGTTAC	2820
AGAATTAAAT	ATGCCCTCAT	CTCTGGAAG	GACCACTGTG	AGGTTGATGT	TCCAAAGAGC	2880
CAACAAGGCA	CAACCAAAAC	CACACTCACA	GGTGTGAGG	CGGGAACTGA	ATATGGGATT	2940
GGAGTTTCTG	CTGTGAAGGA	AGACAAGGAG	AGCAATCCAG	CGACCATCAA	CGCAGCCACA	3000
GAGTTGGACA	CGCCCAAGGA	CTTTCAGGTT	TGTGAAACTG	CAGAGACCA	CTTGACCTGT	3060
CTCTGGAAGA	CACCGTTGGC	CAAAATTTGAC	CGGTACCGCC	TCAATTACAG	TCTCCCCACA	3120
GGCCAGTGG	TGGGAGTGCA	GCTTCCAAGA	AACACCACTT	CTATGTCTCT	GAGAGGGCTG	3180
GAACCAGGAC	AGGAGTACAA	TGTCTCTCTG	ACAGCCGAGA	AAGGCAGACA	CAAGAGCAAG	3240
CCCGCAGGTG	TGAAGGCATC	CAGTGAACAA	GCCCTGAGC	TGGAAAACT	CACCGTGAAT	3300
GAGGTGTGGT	GGGATGGCCT	CAGACTCAAC	TGGACCGCGG	CTGACCAAGC	CTATGAGCAC	3360
TTTATCATTC	AGGTGCAGGA	GGCCAACAA	GTGGAGGCA	CTCGGAACCT	CACCGTGGCT	3420
GGCAGCTTTC	GGGTGTGGA	CATACCGGG	CTCAAGGCTG	CTACGCTTGA	TACAGTCTCC	3480
ATCTATGGGG	TGATCCAGGG	CTATAGAACA	CCAGTGTCTT	CTGTGAGGC	CTCCACAGGG	3540
GAAACTCCCA	ATTTGGGAGA	GGTGTGTGT	GGCAGGCTG	GCTGGGATGC	CTTCAAACTC	3600
AACTGGAAGT	CTCCAGAAGG	GGCTATGAG	TACTTTTTC	TTGAGGTGCA	GGAGGCTGAC	3660
ACAGTAGAGG	CAGCCCAAGAA	CTTCACTGTG	CAGGAGGAC	TGAGGTCCAC	AGACCTGGCT	3720
GGGTCAAAG	CAGCCACTCA	TTATACCATC	ACCATCCGCG	GGGTCACTCA	GGACTTCAGC	3780
ACAAACCTCT	TCTCTGTTGA	AGTCTTGACA	GAGGAGGTTT	CAGATATGGG	AAACCTCACA	3840
GTGACCGAGG	TTAGCTGGGA	TGCTCTCAGA	CTGAACTGGA	CCACGCCAGA	TGGAACCTAT	3900
GACCACTTTA	CTATTGAGGT	CCAGGAGGCT	GACCACTGTG	AAGAGGCTCA	CAATCTCAGG	3960
GTCTCTGGCA	GGCTGGGTTT	CATGGAATTC	CCAGGCTTCA	GGGTGGGAC	TCCTTACACA	4020
GTCACTCTGC	ACGGCGAGGT	CAGGGGCGAC	AGCACTCGAC	CGCTTGTGT	AGAGGTCTCT	4080
CAGTGGGACG	TGCCGCTCCA	GTCCCGGCTG	TGTGAGCTG	GGGAACGACA	TCTCCAGCAG	4140
ACAGAGGATC	TCCACAGCT	GGGAGATTTA	GGGTGTGTG	AGGTGGGCTG	GGATGGGCTC	4200
AGACTCAACT	GGACCGCAGC	TGACAAATGCC	TATGAGCACT	TTGTCAATTC	GGTGCAGGAG	4260
GTCAACAAAG	TGAGGCGAGC	CCAGAACTTC	ACGTTGGCTG	GCAGGCTCAG	GGCTGTGGAC	4320
ATCCCGGGCC	TGAGGCTGCT	CACGCTTAT	AGATCTTCCA	TCTATGGGGT	GATCCGGGGC	4380
TATAGAACAC	CAGTACTCTC	TGCTGAGGCT	TCCACAGCCA	AAGAACTTGA	AATTGGGAAAC	4440
TTAAATGTGT	CTGACATAAC	TCCCGAGAGC	TTCAATCTCT	CGTGGATGGC	TACCGATGGG	4500
ATCTTCCAGA	CGTTTACCAT	TGAAATTTAT	GATTCGAATA	GGTTGGTGGG	GACTGTGGAA	4560

REPLACEMENT SHEET (RULE 26)

TATAATATCT	CTGGTGTCTGA	ACGAACTGCG	CATATCTCAG	GGCTACCCCG	TAGTACTGAT	4620
TTTTATTGCT	ACCTGTCTGG	ACTTGTCTCG	AGCATGCGGA	CCAAAACCAT	CAGTGGCCCA	4680
GGCACGACAG	AGGCGCTGCG	CGTTGTGGAA	AACCTAAGCA	TTTGGGACAT	TAATGCGTAC	4740
GGGTTTCACAG	TTTCTGTGAT	GGCATGGAAG	AATGCTTTTG	ACAGCTTTCT	AGTAACGGGTG	4800
GTGGATTCTG	GGAAAGCTGCT	GGACCGGCAAG	GAATTCACAC	TTTCAGGAAAC	CCAGAGGGAAG	4860
CTGGAGCTTA	GAGGCTCTAT	AACTGGCATT	GGCTATGAGG	TTATGGTCTC	TGGCTTCACC	4920
CAAGGGGCAAT	AAACCAAGCG	CTTGAGGGCT	GAGATTGTTA	CAGAAGCGCA	AACGGAAGTT	4980
GACAACTTTC	TGGTTTCAGA	TGGCAACCGCA	GACGGTTTCC	GTCTGTCTTG	GACAGCTGAT	5040
GAAGGGGCTG	TGGACAAATT	TGTTCTCAAA	ATCAGAGATA	CCAAAAGGCA	GTCTGAGCCA	5100
CTGGAAATAA	CGCTACTTGC	CGCGGAAGCT	ACGAGGGACA	TAACAGGCTT	CAGAGAGGGT	5160
ACTGAATACG	AAATTGAACT	CTATGGAATA	AGCAAGGGAA	GGCGATCCCA	GACAGTCAGT	5220
GCTATAGCAA	CAACAGGCAAT	GGGCTCCCGA	AAGGAAATCA	TTTTCTCAGA	CATCACTGAA	5280
AATTGCGGTA	CTGTCAAGCTG	GAGGGCAACG	ACGGCCCAAG	TGGAGAGCTT	CCGGATTACC	5340
TATGTGCCCC	TTACAGGAGG	TACACCTTCC	ATGTTAACTG	TGGACGGAAC	CAAGACTCAG	5400
ACCAGGGCTGG	TGAAACTCAT	ACCTGGGCTG	GAGTACCTTG	TCAGCATCAT	CGCCATGAAG	5460
GGCTTTGAGG	AAAGTGAACG	TGTCTCAGGG	TCATTCAACA	CAGCTCTGGA	TGGCCCATCT	5520
GGCTCTGGTA	CAGCCCAACAT	CACTGACTCA	GAAGCTTGG	CCAGGTGGCA	CGGACCCATT	5580
GGCACTGTGG	ACATTTATGT	CATCTCTTAC	ACAGGGGAGA	AAGTGGCAGA	AATTACAGGC	5640
ACGGTGTCCG	GGAAACAGAT	GGAGTATGCT	CTGACCGAAC	TCGAGCCTGC	CACGGAATAC	5700
ACACTGAGAA	TCTTTGCAGA	GAAAGGGGCC	CAGAAGAGCT	CAACCATCAC	TGCCAAGTTC	5760
ACAACAGAGC	TCGATTCTCC	AAGAGACTTG	ACTGCTACTG	AGGTTCACTC	GGAAACTGCC	5820
CTCTTTACCT	GGCGACCCCG	CGGGGCATCA	GTCAACGGTT	ACCTGCTGGT	CTATGAATCA	5880
GTGGATGGCA	CACTCAAGGA	AGTCATTGTG	GGTCCAGATA	CCACCTCTTA	CAGCCTGGCA	5940
GACCTGAGCC	CATCCACCCA	CTACACAGCC	AAGATCCAGG	CACTCAATGG	GGCCCTGAGG	6000
AGCAATATGA	TCAGAGCCAT	CTTCAACCAA	ATTGGACTCC	TGTACCCCTT	CCCAAGGAC	6060
TGGTCCCAAG	CAATGCTGAA	TGGAGACACG	ACCTCTGGCC	TCTACACCAT	TTATCTGAAT	6120
GGTGATAAGG	CTCAGGCGCT	GGAACTCTTC	TGTGACATGA	CCTCTGATGG	GGGTGGATGG	6180
ATTGTGTTCC	TGAGACGCAA	AAACGGACGC	GAGAACTTCT	ACCAAACTG	GAAGGCATAT	6240
GCTGCTGGAT	TTGGGGACCG	CAGAGAAGAA	TTCTGGCTTG	GGCTGGACAA	CGTGAACAAA	6300
ATCAGAGCCC	AGGGGCACTA	CGAGCTCCGG	GTGGACCTGC	GGGACCATGG	GGAGACAGCC	6360
TTTGTCTCT	ATGACAAAGT	CAGCTTGGGA	GATGCCAAGA	CTGGCTACAA	GCTGAAGGTG	6420
GAGGGGTACA	GTGGACAGC	AGGTGACTCC	ATGGCTTACC	ACAATGGCAG	ATCTTCTTCC	6480
ACCTTTGACA	AGGACACAGA	TTGAGCCATC	ACCAACTGTG	CTCTGTCTAC	AAGGGGCTTC	6540
TGGTACAGGA	ACTGTCAACG	TGTCAACCTG	ATGGGGAGAT	ATGGGGACAA	TAACCAAGT	6600
CAGGGGGTTA	ACTGTTTCCA	CTGGAAGGGC	CACGAACACT	CAATCCASTT	TGCTGAGATG	6660
AAGCTGAGAC	CAAGCAACTT	CAGAAATCTT	GAAGGCAAGC	GCAACCGGGC	ATAAATTGGA	6720
GGGACCACTG	GGTGAAGAG	GAATAAGGGG	GGCCAGAGCG	AGGAAAGGAT	TTTACCAAG	6780
CATCAATACA	ACCAGCCCAA	CCATCGGTCC	ACACCTGGGC	ATTTGGTGAG	AATCAAAGCT	6840
GACCATGAT	CGCTGGGGCC	AACGGCAACA	GCATGGGCTT	CACCTCCTCT	GTGATTTCTT	6900
TCTTTTGACC	AAAGACATCA	GTCTCCAACA	TGTTCTGTCT	TTGTTGTTTG	ATTGAGCAAA	6960
AATCTCCAG	TGACAACATC	GCAATAGTTT	TTTACTTCTC	TTAGGTGGCT	CTGGGATGGG	7020
AGAGGGGTAG	GATGTACAGG	GGTAGTTTGT	TTTAGAACCA	GGCGTATTTT	ACATGAAGCT	7080
GTATAATTAA	TTGTCAATTAT	TTTTTTTAGC	AAAGATTAAA	TGTGTCAATT	GAAGCCATCC	7140
CTTTTTTTAC	ATTTTCATACA	ACAGAAACCA	GAAAAAGCAAT	ACTGTTTCCA	TTTTAAGGAT	7200
ATGATTAATA	TTATTAATAT	AATAATGATG	ATGATGATGA	TGAAAACTAA	GGATTTTTCA	7260
AGAGATCTTT	CTTTCCAAAA	CATTTCTGGA	CAGTACCTGA	TTGTATTTTT	TTTTTAAATA	7320
AAAGCACAA	TACTTTTGAA	AAAAAA				7346

(2) INFORMATION FOR SEQ ID NO: 2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

REPLACEMENT SHEET (RULE 26)

(A) NAME/KEY: exon
(B) LOCATION:1..17

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:

GGTTTGGGTG GAGGTGG

17

(2) INFORMATION FOR SEQ ID NO: 3:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 17 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..17

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:

GGAGGTGGTA CCCCCGG

17

(2) INFORMATION FOR SEQ ID NO: 4:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:

GGTGGTACCC CCGG

14

(2) INFORMATION FOR SEQ ID NO: 5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:

GGAGGTGGTA CCCC

14

(2) INFORMATION FOR SEQ ID NO: 6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..17

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:

AGAAAGAACG AAAGGAA

17

(2) INFORMATION FOR SEQ ID NO: 7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..12

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:

GGAGGTGGTA CC

12

(2) INFORMATION FOR SEQ ID NO: 8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 16 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..16

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:

GGAGCGATGG CTTCCA

16

REPLACEMENT SHEET (RULE 26)

(2) INFORMATION FOR SEQ ID NO: 9:

- (1) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(11) MOLECULE TYPE: DNA (genomic)

(1x) FEATURE:

- (A) NAME/KEY: exon
(B) LOCATION:1..15

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 9:

AAAGGAACGG GAGCG

15

(2) INFORMATION FOR SEQ ID NO: 10:

- (1) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(11) MOLECULE TYPE: DNA (genomic)

(1x) FEATURE:

- (A) NAME/KEY: exon
(B) LOCATION:1..15

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 10:

GGTCGGTTTG GGTGG

15

(2) INFORMATION FOR SEQ ID NO: 11

- (1) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 16 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(11) MOLECULE TYPE: DNA (genomic)

(1x) FEATURE:

- (A) NAME/KEY: exon
(B) LOCATION:1..16

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 11:

CTTACAGGTC CGTTGA

16

(2) INFORMATION FOR SEQ ID NO: 12:

REPLACEMENT SHEET (RULE 26)

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 15 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..15

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 12:

GGCCGTGTTT GCTGT

15

(2) INFORMATION FOR SEQ ID NO: 13:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 16 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..16

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 13:

TCACCCCTCT TTCTGG

16

(2) INFORMATION FOR SEQ ID NO: 14:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 14 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..14

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 14:

GGACACCGAC ACGG

14

(2) INFORMATION FOR SEQ ID NO: 15:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 14 base pairs

REPLACEMENT SHEET (RULE 26)

(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

AACGGGAGCG ATGG

14

(2) INFORMATION FOR SEQ ID NO: 16:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:

ATCTCGGGGT CGTC

14

(2) INFORMATION FOR SEQ ID NO: 17:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:

AAAGAACGAA AGGAA

15

(2) INFORMATION FOR SEQ ID NO: 18:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

REPLACEMENT SHEET (RULE 26)

(11) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..11

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:

GGTGGTACCC C

11

(2) INFORMATION FOR SEQ ID NO: 19:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..11

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:

CCCGGTACTG A

11

(2) INFORMATION FOR SEQ ID NO: 20:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..13

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

CCACAGAAAG AAC

13

(2) INFORMATION FOR SEQ ID NO: 21:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 17 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

REPLACEMENT SHEET (RULE 26)

(1x) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..17

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 21:

GGTTTGGGTG GAGGTGG

17

(2) INFORMATION FOR SEQ ID NO: 22:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 17 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(1x) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..17

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 22:

GGAGGTGGTA CCCCCGG

17

(2) INFORMATION FOR SEQ ID NO: 23:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 14 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(1x) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 23:

GGTGGTACCC CCGG

14

(2) INFORMATION FOR SEQ ID NO: 24:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 14 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(1x) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..14

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(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 24:

GGAGGTGGTA CCCC

14

(2) INFORMATION FOR SEQ ID NO: 25:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..17

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 25:

AGAAAGAACG AAAGGAA

17

(2) INFORMATION FOR SEQ ID NO: 26:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..12

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 26:

GGAGGTGGTA CC

12

(2) INFORMATION FOR SEQ ID NO: 27:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 16 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..16

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 27:

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GGAGCGATCG CTTCGA

16

(2) INFORMATION FOR SEQ ID NO: 28:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 15 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 28:

AAAGGAACGG GAGCG

15

(2) INFORMATION FOR SEQ ID NO: 29:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 15 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 29:

GGTCGGTTTG GGTGG

15

(2) INFORMATION FOR SEQ ID NO: 30:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 16 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..16

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 30:

CTTACAGGTC CGTTGA

16

(2) INFORMATION FOR SEQ ID NO: 31:

- (1) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 15 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

- (ix) FEATURE:
(A) NAME/KEY: exon
(B) LOCATION:1..15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 31:

GGCCGTGTTC GCTGT

15

(2) INFORMATION FOR SEQ ID NO: 32:

- (1) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 16 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

- (ix) FEATURE:
(A) NAME/KEY: exon
(B) LOCATION:1..16

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 32:

TCACCCCTCT TTGTGG

16

(2) INFORMATION FOR SEQ ID NO: 33:

- (1) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 14 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

- (ix) FEATURE:
(A) NAME/KEY: exon
(B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 33:

GGACACCGAC ACGG

14

(2) INFORMATION FOR SEQ ID NO: 34:

- (1) SEQUENCE CHARACTERISTICS:

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(A) LENGTH: 14 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 34:

AACGGGAGCG ATGG

14

(2) INFORMATION FOR SEQ ID NO: 35:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 14 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 35:

ATCTCGGGGT CGTC

14

(2) INFORMATION FOR SEQ ID NO: 36:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 15 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 36:

AAAGAACGAA AGGAA

15

(2) INFORMATION FOR SEQ ID NO: 37:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single

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(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon

(B) LOCATION:1..11

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 37:

GGTGGTACCC C

11

(2) INFORMATION FOR SEQ ID NO: 38:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon

(B) LOCATION:1..11

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 38:

CCCGGTACTG A

11

(2) INFORMATION FOR SEQ ID NO: 39:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon

(B) LOCATION:1..13

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 39:

CCACAGAAAG AAC

13

(2) INFORMATION FOR SEQ ID NO: 40:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 17 base pairs

(B) TYPE: nucleic acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

REPLACEMENT SHEET (RULE 26)

(1x) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..17

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 40:

GGTTTGGGTTG GAGGTGG

17

(2) INFORMATION FOR SEQ ID NO: 41:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 17 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(11) MOLECULE TYPE: DNA (genomic)

(1x) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..17

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 41:

GGAGGTGGTA CCCCTGG

17

(2) INFORMATION FOR SEQ ID NO: 42:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 14 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(11) MOLECULE TYPE: DNA (genomic)

(1x) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..14

(x1) SEQUENCE DESCRIPTION: SEQ ID NO: 42:

GGTGGTACCC CCGG

14

(2) INFORMATION FOR SEQ ID NO: 43:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 14 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(11) MOLECULE TYPE: DNA (genomic)

(1x) FEATURE:
 (A) NAME/KEY: exon

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(B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 43:

GGAGGTGGTA CCCC

14

(2) INFORMATION FOR SEQ ID NO: 44:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 17 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..17

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 44:

AGAAAGAACG AAAGSAA

17

(2) INFORMATION FOR SEQ ID NO: 45:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 12 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..12

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 45:

GGAGGTGGTA CC

12

(2) INFORMATION FOR SEQ ID NO: 46:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 16 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..16

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 46:

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GGAGCGATGG CTTCOA

16

(2) INFORMATION FOR SEQ ID NO: 47:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 15 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

- (ix) FEATURE:
 - (A) NAME/KEY: exon
 - (B) LOCATION:1..15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 47:

AAAGGAACGG GAGCG

15

(2) INFORMATION FOR SEQ ID NO: 48:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 15 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

- (ix) FEATURE:
 - (A) NAME/KEY: exon
 - (B) LOCATION:1..15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 48:

GGTCGGTTTG GGTGG

15

(2) INFORMATION FOR SEQ ID NO: 49:

- (i) SEQUENCE CHARACTERISTICS:
 - (A) LENGTH: 16 base pairs
 - (B) TYPE: nucleic acid
 - (C) STRANDEDNESS: single
 - (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

- (ix) FEATURE:
 - (A) NAME/KEY: exon
 - (B) LOCATION:1..16

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 49:

CTTACAGGTC CGTTGA

16

(2) INFORMATION FOR SEQ ID NO: 50:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 15 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 50:

GGCCGTGTTG GCTGT

15

(2) INFORMATION FOR SEQ ID NO: 51:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 16 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..16

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 51:

TCACCCCTCT TTCTGG

16

(2) INFORMATION FOR SEQ ID NO: 52:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 14 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

- (A) NAME/KEY: exon
- (B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 52:

GGACACCGAC ACGG

14

(2) INFORMATION FOR SEQ ID NO: 53:

(1) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 14 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 53:

AACGGGAGCG ATGG

14

(2) INFORMATION FOR SEQ ID NO: 54:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 14 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..14

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 54:

ATCTCGGGGT CGTC

14

(2) INFORMATION FOR SEQ ID NO: 55:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 15 base pairs
 (B) TYPE: nucleic acid
 (C) STRANDEDNESS: single
 (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:
 (A) NAME/KEY: exon
 (B) LOCATION:1..15

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 55:

AAAGAACGAA AGGAA

15

(2) INFORMATION FOR SEQ ID NO: 56:

(i) SEQUENCE CHARACTERISTICS:
 (A) LENGTH: 11 base pairs
 (B) TYPE: nucleic acid

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(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..11

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 56:

GGTGGTACCC C

11

(2) INFORMATION FOR SEQ ID NO: 57:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 11 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..11

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 57:

CCCGGTACTG A

11

(2) INFORMATION FOR SEQ ID NO: 58:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 13 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(ix) FEATURE:

(A) NAME/KEY: exon
(B) LOCATION:1..13

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 58:

CCACAGAAAG AAC

13